

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.1 Location and Time**

Location and time research refers to a type of research that focuses on understanding the relationships between variables such as time, location, and behavior. It involves collecting and analyzing data related to specific time and location factors to better understand how they influence various outcomes or behaviors. This research is planned to be started at April to May 2023 and placed at SMAS An-Nizam Bromo, Kec. Medan Kota, Kota Medan, Sumatera Utara. Researcher decides to choose this school because researcher ever observe this school in 2022 and researcher got that the problem of students at eleventh grade almost because the old method of teaching, so researcher interested to apply this study into this school to see the effect.

#### **3.2 Population and Sample**

##### **3.2.1 Population**

The population in the study is the area that the researcher wants to examine. As according to Sugiyono (2011: 80), population is a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn. This opinion becomes a reference for the writer to determine the population. The population in this research was the eleventh grade of SMAS An-Nizam Medan

##### **3.2.2 Sample**

The sample is part of the population that has the same properties as the object which is the data source. The sample is part or representative of the population being studied. Based on the above opinion that the sample is part or representative of the population to be studied. The researcher refers to determining the number of samples to be studied, namely: "regarding the determination of the size of the sample there is no absolute determination,

meaning that there is no provision for what percentage of a sample must be taken". Based on the opinion above, the researcher argue that the sample is a portion of the population selected as a data source which is considered to represent the total number. The researcher took a sample in this study amounting to 30 students at class XI MIPA 2.

XI MIPA 1	
Boy	10
Girl	20

XI MIPA 2	
Boy	12
Girl	18

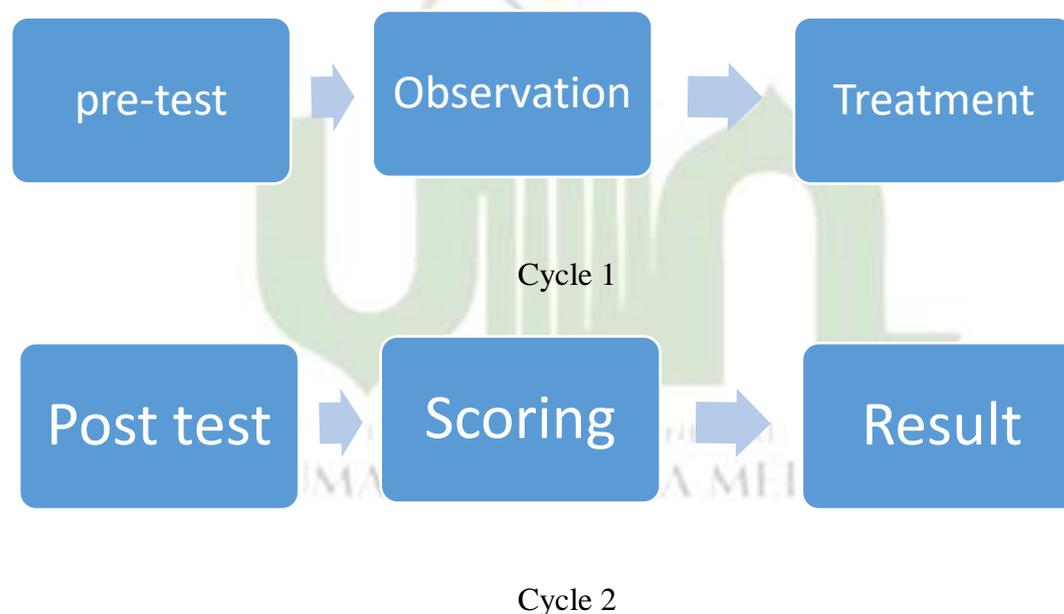
### 3.3 Research Method

A research method is a systematic approach used to collect and analyze information in order to answer a research question or hypothesis. There are several research methods that can be used, depending on the nature of the research question and the type of data that is being collected. This research using quantitative, this method introduce by Hymes (1977) where quantitative research is a scientific method used to collect and analyze numerical data that can be statistically analyzed. This type of research typically involves the use of surveys, experiments, and other forms of data collection that focus on measuring and quantifying specific variables or concepts. The primary goal of quantitative research is to test hypotheses or answer research questions using empirical evidence that can be measured and analyzed. It often involves a large sample size and employs statistical analysis to derive conclusions from the data. Quantitative research is commonly used in fields such as social sciences, psychology, economics, and market research to explore relationships between variables, test theories, and make predictions. It is often contrasted with qualitative research, which involves collecting and analyzing non-numerical data, such as interviews, observations, and open-ended survey responses.(Hymes, 1977).

Why researcher choose this method is because this method effective to use in this topic that focused on research observation to collect sample data.

### 3.4 Research Instrument

A research instrument is a tool or device that is used to collect data for a research study. Research instruments can take many different forms, and they are typically chosen based on the research questions or objectives, as well as the type of data that is being collected. In this research the research instrument focused in the observation. Observational research, a subset of non-experimental quantitative research, collects data by having researchers make observations. So to observe students pronunciation, researcher has a score indicator to measure how much students improvement after this method applicated.



### 3.5 Data Analysis Technique

Quantitative data analysis techniques are statistical methods used to analyze and interpret numerical data in research studies and in this research use observation, these techniques are used to describe the basic features of the data, such as mean, median, mode, standard deviation, and range. Observation can be useful for summarizing the data and identifying patterns or trends. To get the research findings and the students' participation in the teaching and learning process, the researcher administered a speaking test. It was an oral exam that was used. The test that was administered was an individual test, and the subject matter re-telling story. The

students had to give examples of story and individuals before giving a brief explanation in the form of a sentence of the story. The results of this test would allow the researcher and collaborator to determine how much the students' pronunciation had improved.

